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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,587	10/21/2004	Guangzhou Zou	1392/10/21 PCT/US	5250
25297	7590	12/07/2006	EXAMINER	
JENKINS, WILSON, TAYLOR & HUNT, P. A. 3100 TOWER BLVD SUITE 1200 DURHAM, NC 27707			SKOWRONEK, KARLHEINZ R	
			ART UNIT	PAPER NUMBER
			1631	

DATE MAILED: 12/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

TH

Office Action Summary	Application No. 10/500,587	Applicant(s) ZOU ET AL.	
	Examiner Karlheinz R. Skowronek	Art Unit 1631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 7-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/12/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I (claims 1-6) in the reply filed on 08 November 2006 is acknowledged.

Claim Status

Claims 1-28 are pending.

Claims 7-28 are withdrawn as being drawn to a non-elected group.

Claims 1-6 are being examined.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 12 October 2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner has considered the information disclosure statement.

Specification

The use of the trademark GENECHIP (Affymetrix) and PRISM (Applied Biosystems), have been noted in this application. They should be capitalized wherever they appear and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

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The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01. See for example, p. 32, line 13.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claim 1-5 is rejected under 35 U.S.C. 102(e) as being anticipated by Fodor et al (USPN 6,551,784).

The claims are directed to a method of correcting oligo probes by measuring signals obtained from the probes; calculating a normalization/correction factor for the probes using the average; determining an uncertainty coefficient for the probes calculated from the ratio of the average to the standard deviation.

Fodor et al teach a method of assessing the variability of observed signals from probes on a microarray. To accomplish this, Fodor et al determine the average (mean) signal intensity from control probes on an array obtained from intrinsically multiple hybridizations and use the average to calculate a correction coefficient equal to a

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constant (col. 36, lines 15-20). Fodor teach the determination of the statistical coefficient of variation known in the art to be the ratio of the standard deviation divided by the average (col. 4, lines 13-21). Fodor teach the use of statistical measure to regulate the removal of data which do not fit a determined value (col. 49, lines 63-69).

2. Claims 1-6 are rejected under 35 U.S.C. 102(a) as being anticipated by Tseng et al (NAR, Vol. 29, No. 12, p. 2549-2557, 2001).

The claims are directed to a method of correcting oligo probes by measuring signals obtained from the probes; calculating a normalization/correction factor for the probes using the average; determining an uncertainty coefficient for the probes calculated from the ratio of the average to the standard deviation.

Tseng et al teach a method of calibrating nucleotide arrays by measuring signals during multiple hybridizations from the oligonucleotides probes on the array (p. 2250, col. 2, para. 3, lines 3-12), determining an uncertainty coefficient for each probe that is based on the ratio between the average and standard deviation (p. 2250 to p. 2251, col. 1, lines 1-6). The uncertainty coefficient of Tseng et al (also called the quality of the data) is the inverse of the statistical value, coefficient of variation (CV). Thus for probes of good quality, the actual value of CV will be less than 1.0 and consequently the quality of the data value $1/CV$ will be greater than 1. For example, probes with CV of 0.99 will have a quality of the data value of greater than 1.0. In the examples demonstrated in figure 1 of Tseng et al, the CV values of all the data is less than 0.5 which corresponds to a quality value of 2. Thus Tseng teaches uncertainty coefficients of greater than 1.0.

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Tseng et al describe disregarding a probe from analysis if the CV is not within a threshold window (p. 2551, col. 1, para. 1, lines 7-8 and col. 2, para. 1, lines 1-14).

Tseng et al teach the calculation of a correction coefficient based on the average probe intensity (p.1-2, supplementary material, col.1, para. 3, line 4).

Conclusion

No claims allowable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karlheinz R. Skowronek whose telephone number is (571) 272-9047. The examiner can normally be reached on Mon-Fri 8:00am-5:00pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Wang can be reached on (571) 272-0811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Karlheinz R. Skowronek/



MICHAEL BORIN, PH.D
PRIMARY EXAMINER

